AMENDMENTS TO THE SPECIFICATION

Cancel the paragraph previously inserted at page 2 between lines 14-20, and replace with the following:

--A method of measuring wall thickness of a transparent cylindrical container in accordance with the presently preferred embodiments of the invention includes moving the container transversely through a defined path while simultaneously rotating the container about its axis. A line-shaped light beam is directed onto the wall of the container, with the line-shaped light beam having a long dimension perpendicular to the axis of the container and parallel to the direction of translation of the container. Light energy is directed onto a sensor as reflected from portions of the outer and inner wall surfaces of the container <u>that are perpendicular to the light energy directed onto the container, as viewed from a direction parallel to the container axis</u>, and container wall thickness is measured as a function of separation at the sensor between the light reflected from the outer and inner wall surfaces.--

Cancel the paragraph previously inserted between page 3, line 18 and page 4, line 4, and replace with the following:

--Apparatus for measuring sidewall thickness of a container in accordance with the preferred embodiments of the invention includes a conveyor for moving the container transversely of its axis through an inspection station and simultaneously rotating the container about its axis. A light source and an illumination lens system direct onto the sidewall of the container a line-shaped light beam having a long dimension perpendicular to the axis of the container and parallel to the direction of movement of the container through the inspection station. A light sensor and an imaging lens system direct onto the

sensor light energy reflected from portions of the outer and inner sidewall surfaces that are perpendicular to the illumination energy as viewed from a direction parallel to the container axis ~~nearest to the sensor~~. An information processor is responsive to light energy directed onto the light sensor by the imaging lens system for determining the thickness of the container between the outer and inner sidewall surfaces.--

Cancel the three paragraphs previously inserted between page 6, line 15 and page 7, line 25 and replace with the following:

--Container 32 is translated and rotated through the inspection station by a conveyor 56 (FIG. 4). Conveyor 56 includes one or more linear rails 58 for engaging and supporting the container sidewall, and a linear driven belt 60 for "rolling" the containers along the opposing rails. The containers preferably are translated horizontally and rotated about their vertical axes. Conveyors of this type for simultaneously translating and rotating containers through an electro-optical inspection station are illustrated, for example, in U.S. Patents 4,874,940 and 6,172,355, the disclosures of which are incorporated herein by reference for purposes of background.

FIGS. 2 and 3 illustrate illumination lens system 36 in greater detail. The output of laser 34 is directed through a cylinder lens 62, which could be a glass rod for example, which spreads or fans the light in the plane of FIG. 3. A second cylinder lens 64 has its focal point at the divergence point of lens 62. The result is that the light beam leaves lens 64 as a wide swath with its rays parallel and at approximately the thickness of the laser output. A third cylinder lens 66 has its focal point at the plane of the inner surfaces of rails 58, and thus at the outer surface of container 32 in engagement with the rails. Cylinder lens 66 thus focuses onto the outer surface of the container a thin line-

shaped light beam 35 that has a long dimension perpendicular to the axis of the container and parallel to the direction of translation of the container through the inspection station, as best seen in FIG. 3.

Referring now to FIGS. 2 and 4, imaging lens system 46 includes a cylinder lens 68 and a fresnel lens 70. The combination of cylinder lens 68 and fresnel lens 70 has an image plane in which sensor 48 is disposed and an object plane colinear with the long dimension of line-shaped illumination light beam 35 at the outer sidewall surface of the container. Thus, imaging lens system 46 focuses reflected light beams 40, 44 (FIG. 5) onto sensor 48, with the separation between the light beams at the sensor being indicative of the container sidewall thickness. In the event that the inside surface of container sidewall 38 is tilted, reflected light beam 44 takes the path illustrated at 44a in FIG. 2, but yields the same wall thickness indication at sensor 48. As illustrated in FIG. 6, imaging lens system 46 ensures that only the reflected light rays 40 (or 44) that are reflected from points perpendicular to the illumination rays, as viewed from a direction parallel to the container axis ~~nearest to the sensor~~, are directed onto sensor 48. That is, only light rays that are incident on and reflected from the surfaces of the container in a plane that includes the container axis are directed onto the sensor. Light rays 40a and 40b for example, which are reflected from points non-perpendicular to the illumination light energy, are divergent and directed by lens system 46 away from light sensor 48. Light sensor 48 preferably comprises a lineal array of light sensor elements, with the array being in the plane of FIG. 2 and perpendicular to the plane of FIG. 4. Alternatively, sensor 48 may comprise an area array sensor in which only a portion is used for wall thickness measurement in accordance with the present invention.--